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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Applicant: Barron	)	Art Unit: 3751
Serial No.: 10/783,567	)	Examiner: Bastianelli
Filed: February 20, 2004	)	**DP-311,107**
For: **SOLENIOD VALVE WITH VALVE HOUSEING HAVING INTERNAL PORTS, WINDING BAY, VALVE SEAT, AND BALL RETAINER**	)	March 14, 2007 750 B Street, Suite 3120 San Diego, CA 92101

FACSIMILE TRANSMITTAL LETTER FOR - APPELLANT'S BRIEF TO THE BOARD OF PATENT APPEALS AND INTERFERENCES UNDER C.F.R. §1.192

Commissioner of Patents and Trademarks
Alexandria, VA 22313
Facsimile No.: (571) 273-8300

Dear Sir:

In connection with the above-captioned patent application, enclosed herewith are the following:

1. Appellant's Brief in 6 pages, along with Appendix A in 3 pages, Appendices B and C in 2 pages for a total of 11 pages.
2. Credit Card Payment form PTO-2038 to cover Appeal fees. The Notice of Appeal fees were previously paid February 17, 2007.

The Commissioner is authorized to charge any additional fee(s) or underpayment of fee(s) and credit any overpayment of fees to the credit card attached under 37 CFR 1.16 and 1.17.

Respectfully submitted,

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Filed: February 20, 2004	DP-311107
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APPEAL BRIEF

Commissioner of Patents and Trademarks

Dear Sir:

This brief is submitted under 35 U.S.C. §134 and is in accordance with 37 C.F.R. Parts 1, 5, 10, 11, and 41, effective September 13, 2004 and published at 69 Fed. Reg. 155 (August 2004). This brief is further to Appellant's Notice of Appeal filed February 17, 2007.

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(1) Real Party in Interest

The real party in interest is Delphi Technologies, Inc.

(2) Related Appeals/Interferences

No other appeals or interferences exist which relate to the present application or appeal.

(3) Status of Claims

Claims 1, 4-7, and 9-11 are pending and finally rejected, which rejections are appealed, and Claims 2, 3, 8, and 12-14 have been canceled.

(4) Status of Amendments

No amendments are outstanding.

(5) Summary of Claimed Subject Matter

As an initial matter, it is noted that according to the Patent Office, the concise explanations under this section are for Board convenience, and do not supersede what the claims actually state, 69 Fed. Reg. 155 (August 2004), see page 49976. Accordingly, nothing in this Section should be construed as an estoppel that limits the actual claim language.

Claim 1 sets forth a solenoid valve that has a valve housing (reference numeral 18, figure 1; page 4, line 17) supporting a coil (22, figure 1; page 4, line 18). A ball (42, figures 1 and 2; page 6, line 6) is in the valve housing, and a valve seat (40, figures 1 and 2; page 6, line 5) is also in the valve housing. A rod (32,

figure 1; page 5, line 22) is reciprocatingly disposed in the valve housing between a deenergized configuration, wherein the coil is deenergized and the ball is against the valve seat, and an energized configuration, wherein the coil is energized and the rod is urged against the ball to move the ball away from the valve seat. The rod is distanced from the ball by between one tenth and eight-tenths of a millimeter (0.1mm-0.8mm) inclusive, when in the deenergized configuration (page 8, line 4).

Claim 7 recites a solenoid valve for a vehicle that includes a valve housing (reference numeral 18, figure 1; page 4, line 17) holding a rod (32, figure 1; page 5, line 22), a ball (42, figures 1 and 2; page 6, line 6), and forming a valve seat (40, figures 1 and 2; page 6, line 5) therebetween. The valve housing is formed with a ball retainer rib (54, figure 2; page 6, line 22) defining a supply port (44, figure 2; page 6, line 22) having a first diameter. The ball is disposed between the rib and valve seat and defines a second diameter larger than the first diameter such that the rib retains the ball from passing outward through the supply port (page 7, lines 1 and 2). The rib is deformable such that the ball is pressable through the rib into the location between the rib and the ball seat (page 7, lines 4-6). The valve housing also defines a winding bay (20, figure 1; page 4, line 17), with a coil (22, figure 1; page 4, line 18) being wound in the winding bay.

(6) Grounds of Rejection to be Reviewed on Appeal

(a) Independent Claim 1 and dependent Claims 4-6 have been rejected under 35 U.S.C. §103 as being unpatentable over Okazaki et al., USPN 5,915,416 in view of Teranishi, USPN 5,282,329.

(b) Independent Claim 7 and dependent Claims 9-11 have been rejected under 35 U.S.C. §103 as being unpatentable over Okazaki et al. in view of Gaylord, USPN 3,907,046.

(7) **Argument**

a. Obviousness Rejection of Claim 1

First considering Claim 1, which recites subject matter formerly recited in Claim 2, the crux of the rejection is that Teranishi teaches a rod 25 that is distanced from a ball 17 in the deenergized position, citing col. 5, lines 39-43. In fact, the exact obverse of this allegation is true of Teranishi. The deenergized configuration of Teranishi is shown in Figure 3a in one embodiment and in Figure 5a in an alternate embodiment, col. 5, lines 23-25; col. 6, lines 1 and 2. In these figures, the relied-upon rod plainly contacts the relied-upon disc. Only in the energized configurations of Figures 3b and 3c does the rod become distanced from the disc, and it does so by a mechanism and for a purpose that are not at all related to the present invention. Specifically, when the solenoid of Teranishi is energized, the rod 25 is moved "to reduce hysteresis" while the disc 17 remains in contact with the valve seat under the influence of a spring 28, col. 5, lines 40-45. Accordingly, Teranishi plainly does not teach Claim 1, and since it teaches the opposite configuration in the deenergized state from what is recited in Claim 1 and moreover since it distances its rod from its disc in a state and purpose not relevant to Claim 1, it cannot suggest Claim 1.

Additionally, a specific numeric range appears in Claim 1. No citation exists to any evidence of record for this range in the terms in which it has been cast. For this further reason (failure to identify every

limitation in the prior art or general knowledge in the art, as otherwise required by MPEP §2142), the rejection merits reversal.

No meaningful response to the above observations other than a boilerplate accusation that Appellant is "attacking references individually" has been offered.

b. Obviousness Rejection of Independent Claim 7

The valve seat 30 of Gaylord has been used as the claimed deformable rib and the valve plug 62 as the claimed ball. The rejection merits reversal for the following reasons.

1. The relied-upon valve plug 62 is not a ball as recited in Claim 7. "Ball" is usually taken to mean "sphere", and even if it is to be more broadly construed the plug 62 of Gaylord is not a free-standing object, but rather is integral with the valve plunger 58. Owing to the consequent stretch it takes to equate what is in fact an enlarged end of an elongated plunger to a "ball", Applicant requested, to no avail, evidence that one skilled in the art regards enlarged, non-spherical ends of plungers to be balls, see MPEP §2111.01 (claims must be construed as one skilled in the art would construe them).

2. The relied-upon valve seat 30 is not a rib as recited in Claim 7. It is a valve seat, which has been positively recited elsewhere in Claim 7. If the references were to be combined in accordance with what they teach, as they are supposed to be, combining Gaylord with Okazaki et al. would result in a deformable valve seat as taught by Gaylord in the structure of Okazaki et al., not a deformable rib with separately recited valve seat as set forth in Claim 7.

3. The rib of Claim 7 must define a supply port, with the ball being disposed between the rib and valve seat and with the ball being retained by the rib from passing outward through the supply port. Apart from the errors noted above in regarding the valve seat 30 of Gaylord to be the claimed rib, it is clear that, apropos whatever port the examiner thinks the relied-upon valve seat 30 defines, the relied-upon valve plug 62 indeed passes through the valve seat 30, Gaylord, col. 3, lines 50-55, contrary to what is explicitly set forth in Claim 7.

No meaningful response to the above observations other than a boilerplate accusation that Appellant is "attacking references individually" has been offered.

Respectfully submitted,

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APPENDIX A - APPEALED CLAIMS

1. A solenoid valve, comprising:

a valve housing supporting a coil;

a ball in the valve housing;

a valve seat in the valve housing; and

a rod reciprocatingly disposed in the valve housing between a deenergized configuration, wherein the coil is deenergized and the ball is against the valve seat, and an energized configuration, wherein the coil is energized and the rod is urged against the ball to move the ball away from the valve seat, wherein the rod is distanced from the ball by between one tenth and eight-tenths of a millimeter (0.1mm-0.8mm) inclusive, when in the deenergized configuration.

2 -3. (cancelled)

4. The valve of Claim 1, wherein the valve housing is formed with at least one supply port, the ball being disposed between the supply port and valve seat, the valve housing also defining a control port and an exhaust port, fluid communication being blocked through the supply port and established through the exhaust and control ports in the deenergized configuration, fluid communication being blocked through the exhaust port and established through the supply and control ports in the energized configuration.

5. The valve of Claim 1, further comprising a vehicle fluid system communicating with the valve.

6. The valve of Claim 1, further comprising a primary plate and at least one terminal, the housing being injection molded around the primary plate and terminal to form at least the valve seat and winding bay.

7. A solenoid valve for a vehicle, comprising:

a valve housing holding a rod, a ball, and forming a valve seat therebetween, wherein the valve housing is formed with at least one ball retainer rib defining a supply port having a first diameter, the ball being disposed between the rib and valve seat and defining a second diameter larger than the first diameter such that the rib retains the ball from passing outward through the supply port, wherein said rib is deformable such that the ball is pressable through the rib into the location between the rib and the ball seat, the valve housing also defining a winding bay, a coil being wound in the winding bay.

8. (Canceled)

9. The valve of Claim 7, wherein the valve housing is formed with at least one supply port, the ball being disposed between the supply port and valve seat, the valve housing also defining a control port and an exhaust port, fluid communication being blocked through the supply port and established through the exhaust and control ports in the deenergized configuration, fluid communication being blocked through the exhaust port and established through the supply and control ports in the energized configuration.

10. The valve of Claim 7, further comprising a vehicle fluid system communicating with the valve.

11. The valve of Claim 7, further comprising a primary plate and at least one terminal, the housing being injection molded around the primary plate and terminal to form at least the valve seat and winding bay.

APPENDIX B - EVIDENCE

None (this sheet made necessary by 69 Fed. Reg. 155 (August 2004), page 49978.)

APPENDIX C - RELATED PROCEEDINGS

None (this sheet made necessary by 69 Fed. Reg. 155 (August 2004), page 49978.)